Australian Government
Australian Radiation Protection and Nuclear Safety Agency

arpansa

Role Description

Radiation Scientist

Position number:	13397
Classification:	APS 6
Date of approval:	6 July 2017
Location:	Yallambie, VIC
Branch/Office:	Medical Radiation Services
Section:	Radiotherapy
Immediate supervisor:	EL 1 – PN 13198
Supervisory responsibilities:	No
Restrictions:	Yes. This role is a designated security position which will require the occupant to successfully undertake and maintain a security clearance.
Agency website	www.arpansa.gov.au

Agency overview

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is a statutory agency within the Department of Health portfolio and is the Australian Government's primary authority on radiation protection and nuclear safety. ARPANSA regulates Commonwealth entities using radiation with the objective of protecting people and the environment from the harmful effect of radiation. ARPANSA undertakes research, provides services, and promotes national uniformity and the implementation of international best practice across all jurisdictions.

Section overview

The Radiotherapy Section in the Medical Radiation Services Branch of ARPANSA provides calibration and measurement services to users of ionising radiation measurement equipment, including the Australian radiotherapy community. The Section maintains the Australian primary standards for absorbed dose and exposure, and disseminates these standards via calibrations for dosimetry equipment using X-ray and Gamma ray sources.

Primary purpose of the role

This role delivers traceable calibrations for radiotherapy facilities and other users of radiation measurements at the highest level of accuracy. You will participate in the implementation of reference beams and the maintenance of Australian standards of kerma and absorbed dose. You will also contribute to experimental work and theoretical modelling using your critical data analyses and expertise in radiation physics and quality assurance methods.

Key accountabilities

- Improve the calibration services for radiotherapy by modelling radiation transport for the primary standards, sources and detectors of radiation
- Perform calibrations and irradiations of radiation measuring instruments traceable to Australian standards
- Participate in research and development activities associated with the improvement and maintenance of Australian standards for ionizing radiation, particularly for the medical use of radiation
- Maintain and develop the laboratory quality systems and procedures
- Communicate the work locally and internationally at workshops, conferences and journal publications

Job specific capabilities

To be considered for this position, you must possess a physical sciences degree, preferably at a post graduate level from an Australian University or comparable qualification. It is advantageous to have an in-depth knowledge of scientific computing, Monte Carlo techniques, and modern radiotherapy practice and quality systems.

You will require extensive experience performing careful and precise radiation measurements, and be comfortable applying effective judgement to solve complex problems. Excellent written and verbal communications skills will also be critical to your success in order to confidently present ideas and share work with a range of external and internal stakeholders.

You must hold Australian citizenship or possess permanent residency status leading to citizenship and be prepared to travel interstate from time to time as required. ARPANSA requires all new employees to undertake a baseline security clearance as a condition of engagement.

Selection criteria

There are five selection criteria for this role. Candidates are asked to limit their response to no more than 300 words per selection criteria.

1. Knowledge of ionising radiation physics and Monte Carlo techniques for modelling radiation transport
2. Ability to analyse results, recognise errors and assess uncertainties of measurement
3. Ability to communicate results within ARPANSA and externally, through scientific presentations and reports
4. Ability to work in a team and take responsibility for project outcomes
5. Ability to liaise with users of the dosimetry standards and develop these standards to client needs